Jain College, Jayanagar
I PUC Mock Paper
Subject: BIOLOGY

Duration: 3 Hrs 15 mins **Max.Marks: 70**

GENERAL INSTRUCTIONS:
i) This question paper consists of four parts A, B, C and D. Part D consists of two parts, Section-1 and Section-II.
ii) All the parts are compulsory.
iii) Draw the diagrams whenever necessary. Unlabelled diagrams or illustrations do not attract any marks.

Part-A

Answer the following questions in o*ne* word or *one* sentence each: 10x1=10

1. Define a homochlamydeous flower.
2. What are leucoplasts?
3. What are pseudocoelomate animals?
4. Define Crossing over
5. Why is abscissic acid also knowm as stress hormone?
6. Distinguish between arithmetic growth and geometric growth
7. What is photorespiration?
8. State Blackman' s law of limiting factors.
9. Define Tight junction.
10. What are secondary metabolites?

Part-B

Answer any FIVE of the following questions in 3-5 sentences each, wherever applicable: 5x2=10

11. Differentiate between Racemose and Cymose type of inflorescence.
12. Draw a neat labeled diagram of cell cycle.
13. Define a.Heterodont
    b.Deglutition
14. Explain photolysis of water
15. Explain the types of fermentation
16. a)What is critical concentration ?
    b)What is Nitrogen fixation?
17. What is ERV and EC?
18. Write a note of Rh grouping.

Part-C

Answer any FIVE of the following questions in 40-80 words each, wherever applicable: 5x3=15

19. Explain the components of phloem with a neat labeled diagram
20. Differentiate between liverworts and mosses
21. Drawneat labelleddiagrams of mitotic stages.
22. Explain RER and SER with their functions

23. a) What are pigments?

    b) Name the technique used to separate pigments from green plant

    c) What is the function of accessory pigments.

24. Explain the process and steps of coagulation of blood

25. Give the schematic representation of an overall view of kreb's cycle

26. Define: a)Micturation b) Atrial Natriuritic factor c)Renal calculi

    (Or) Write a note on joints of the Human skeletal system.

Part- D

Section-I

Answer any FOUR of the following questions in 200-300 words each, wherever applicable: 4x5=20

27. a)How are mineral nutrients classified based on quantitative requirements? (1+4)

    b) List any four roles of any 2 micronutrients and 2 macronutrients

28. a) Draw a neat labeled diagram of longitudinal section of kidney

    b) Expand PCT and DCT (4+1)

29. Explain in detail about modifications in stems.

30. Draw neat labeled sketch of mitochondria & chloroplast

31. List 5 physiological effects of any one growth promoter and one growth inhibitor

32. Explain the mechanism of muscle contraction with the help of a neat labeled diagram.

Section-II

Answer any THREE of the following questions in 200-250 words each, wherever applicable:3x5=15

33. Explain the process of generation of nerve impulse in a Neuron.

34. a)Draw a neat diagram of human eye and label the following parts 4+1

    1.Sclera 2.Choroid 3. Retina 4.Optic nerve

    5.Blind spot 6.Fovea 7. Cornea 8.Iris

    b. Define Reflex Action.

35. a)What is ETS? 1+2+2

    b) Why is respiration called amphibolic pathway? Explain

    c) Explain ATP synthesis in mitochondria

36. What is Z scheme of electron transport? Explain with schematic representation?

37. Write the functions of the following hormones:

1.GH	3.FSH	5.TSH	7.Oxytocin	9.Melatonin
2. PRL	4.LH	6.Thyroxine	8.MSH	10.PTH